

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Closed Captioning of Internet Protocol-Delivered Video Programming:)	MB Docket No.: 11-154
Implementation of the Twenty-First)	
Century Communications and Video)	
Accessibility Act of 2010)	

**COMMENTS OF THE
CARL AND RUTH SHAPIRO FAMILY
NATIONAL CENTER FOR ACCESSIBLE MEDIA AT WGBH
(NCAM)**

I. INTRODUCTION

The Carl and Ruth Shapiro Family National Center for Accessible Media at WGBH ("NCAM") provides these comments in response to the Federal Communications Commission's ("FCC") Notice of Proposed Rulemaking ("NPRM") on requirements for closed captioning of Internet-delivered programming (MB Docket No. 11-154) as directed by the "21st Century Communications and Video Accessibility Act"¹ ("CVAA").

The WGBH Educational Foundation is one of the country's leading public broadcasters and has long considered one of its central missions to be increasing access to media for people with disabilities. In 1971, WGBH established The Caption Center (now part of WGBH's Media Access Group), the world's first captioning agency, to produce captions for TV programs so that deaf and hard-of-hearing viewers could gain equal access to those programs. Today, this department at WGBH has more than 75 employees in offices on both coasts and produces captions for every facet and platform of the media world. The Media Access Group began captioning online media as long ago as 1997, and the PBS program "Nova," began captioning its Internet-delivered full-length programs in 1999.

In 1990, WGBH launched Descriptive Video Service® (DVS®) to provide access to TV programs and home media for people who are blind or visually impaired and, in 2001, combined The Caption Center and DVS to form the WGBH Media Access Group. Today, the Media Access Group provides description for such PBS programs as Masterpiece, The American Experience, Arthur and dozens of other children's programs; for CBS programs such as NCIS and CSI; for Fox's The Simpsons; and for hundreds of top movie releases in theaters and on DVD.

In 1993, with the support of the Corporation for Public Broadcasting, WGBH established

¹ Twenty-First Century Communications and Video Accessibility Act of 2010, Pub. L. No. 111-260, 124 Stat. 2751 (2010).

the National Center for Accessible Media (NCAM) as an R&D facility designed to extend WGBH's previous media access efforts into new media and to further the uses of captioning and descriptive video in the home, classroom, workplace, and community. New venues for NCAM's inclusive R&D efforts include museums, theme parks, online media, mobile devices, in-flight entertainment, online learning, e-books and many other technologies and media. NCAM has been in the forefront of most standards activities related to captioning of Internet-delivered media, including numerous World Wide Web Consortium, SMPTE, CEA and other open, ISO-certified proceedings.

In 2006, NCAM established the Internet Captioning Forum with AOL, Google, Microsoft and Yahoo! - the first industry-wide effort to establish best-practices for creation, delivery and display of captioned media on the Web. The work of this group was largely taken over by the SMPTE Ad Hoc Group on broadband captioning, which issued and openly and freely distributed its timed text standards ("SMPTE-TT" and related documents).

II. BACKGROUND

We concur with the recommendations submitted by the Internet Captioning Working Group of the Video Programming Accessibility Advisory Committee ("VPAAC") established by the FCC, which formed the basis for the present NPRM. The general consensus of the full VPAAC on the majority of Internet captioning ("IPCC") processes, procedures, technology and timetables should be given great weight by the Commission as it considers its final IPCC rules.

However, the Commission has asked for input on a number of issues we address in the following comments.

III. DISCUSSION

A. The definition of "apparatus" must include software

Throughout its NPRM, the Commission asks whether software, whether installed on personal computers, mobile devices or set-top boxes or TV receivers, should be considered as part of the definition of apparatus as referenced in the CVAA. In virtually every device that supports Internet-delivered media today, a variety of inter-connected software enables reception and proper display of that video. In very few, if any, situations does hardware alone serve as the enabler of reception, unlike in traditional analog television.

The same is true of technology enabled to display captions on Internet-delivered video today and in the future. Unlike the original line-21 caption-decoder chips, caption reception and display will be handled by software and thus must be considered as part of the definition of apparatus as implied by the language and intent of the CVAA.

B. Innovation should be supported by baseline performance objectives

There will be many entities responsible for assuring the proper delivery of captions in media covered by the CVAA and eventual Commission rules. There in fact will be many more links in the chain of video from the program creator to the caption-viewing end user than in the world of analog and digital television. Each of these responsible entities will need to be assured that its expectations of caption-data delivery will be consistent and predictable, and users should be able to expect reliable delivery regardless of which platform they are employing.

Thus, while the Internet is characterized by constant innovation and efficiencies, baseline architectures are essential for common user experiences and interoperability. In establishing technical standards for first analog then digital TV captioning (based on CEA standards 608 and 708), the Commission recognized the need for an agreed-upon industry standard, one created

through an open, recognized and formally established standards entity. The Commission also recognized the desire of responsible industry parties to distinguish themselves through technology innovation, and allowed for such variations in compliance, as long as basic performance objectives were met and as long as all the links in the delivery chain could rely on a recognized and agreed-upon data format for processing.

C. SMPTE-TT should be designated as the interchange format

The primary parties responsible for initiating creation and delivery of the Internet-based programming covered by the CVAA (programs originally provided by and captioned by broadcasters, cablecasters and satellite programmers) developed a standards-based recommended format for captioning on the Internet: SMPTE-TT. Their efforts should be recognized by the FCC in this proceeding by, at a minimum, designating SMPTE-TT as the baseline technical standard for programming covered by the CVAA.

With an already widely used and understood format, derived from another open standard developed at the W3C (Timed Text Markup Language, or TTML), consumers can be assured that their expectations, as enshrined in the CVAA, can be met.

D. Listings should be provided for consumers and providers/distributors

The Commission asks whether a specific mechanism should be required for indicating which programs have been captioned by video programming owners and delivered to video programming distributors and providers. With the enormous amounts of video programming on the Web and with so many available online versions of even the programs specifically covered by the CVAA, a data-driven mechanism for discovering and tagging covered programming should be required. This requirement would serve not only the entities responsible for compliance but also consumers who are likely, at least in the initial roll-out of captioned programs, to run into uncaptioned materials that may or may not be intended to be delivered with captions. As much shared information as possible should be widely provided; a prototype clearinghouse for such information was created by the above-mentioned Internet Captioning Forum, with initial funding from the interested industry groups. Future similar efforts could be supported by the trade associations which represent the owners, providers and distributors of the covered programs as well as the individual companies.

E. In-band and out-of-band solutions should both be allowed

The Commission asks whether in-band or out-of-band caption delivery formats should be required. Both methods have their appropriate places in the program-delivery chain and both should be allowed as paths to compliance by the regulated entities, as long as the baseline performance objectives can be met.

F. Screen-size limitations are not necessary

Users of mobile and handheld devices have become accustomed to entirely new user-interface experiences, which include reading of text messages and e-mail on screens as small as 1". Similarly, users of such devices have grown to accept the viewing of video on equally small screens. Federally funded research by NCAM² has shown that captions can be readable on these small-footprint devices and demonstrates that screen-size limitations are no longer necessary or appropriate for inclusion in the Commission's captioning rules.

² "Captioning Solutions for Handheld Media and Mobile Devices," U.S. Department of Education, 2007-2010, http://ncam.wgbh.org/invent_build/web_multimedia/mobile-devices

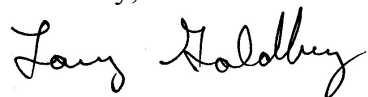
G. User-controlled placement should be allowed but not required

The Commission asks whether user-controlled placement of captions should be required or even allowed under its rules. Demonstrations of this feature have been well-received by caption users and are often-requested by users who are frustrated by improper placement of captions on television. While user-control of placement was not required or noted as an allowed option under its television caption rules, the Commission should allow for such innovation by those parties responsible for display of captions.

IV. SUMMARY

The work of the Commission's Video Programming Accessibility Advisory Committee was laudable for the range of its recommendations, its significant points of consensus and its agreed-upon achievable timetable for all covered programming, including live programming simulcast on both television and the Internet. Technologies are far-along in development and proliferation, certain well-reasoned industry standards have taken into account user needs through open decision-making processes, and caption providers stand by to deliver caption data in whatever formats the video owners deem necessary to comply with their new responsibilities. The Commission can proceed with rules knowing that innovations and standards can be supported through reliable and consistent data creation and handling by all links in the Internet chain.

Sincerely,



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October 18, 2011